C37754
5/16/89

MAY 1989

LOGGING/PULPWOOD/FORESTRY/LUMBER/PANELS

3-DIGIT 208
4
CONGRESSIONAL INFORMATION
SERVICE/STATES REF INDEX
MD 20814

TECHNICAL REPORT

SAWING TECHNOLOGY

1989 Volume 116 Number 5

MAY

Woods

18
Wide tires aid forwarder operations
Environmental concerns, land ownership pattern and profit motives influence shift to wide tires in Nova Scotia; operators respond favorably

Industry

24
Timber supply woes worsen as suits lock up lands
As the pressure on timber supply increases due to court injunctions and an endless array of lawsuits, industry needs to recognize the long-term threats of these actions

26
Attendees in 'buying mood' at annual Machinery Show
At the recent 17th annual FOREST INDUSTRIES Clinic & Machinery Show, a sold-out event, showgoers got to inspect the latest and the greatest in sawmilling and panel equipment

Sawing

T3
Research findings improve saw design and operation

T6
Thin-kerf sawing: how to make it work

T11
Circular saw guides: reducing friction and wear

T14
Circular saw tensioning: what it is, why it matters

T17
Economic advantages of saw management

T20
Central saw shop helps keep mill recovery high

T22
Thin-kerf guided saws need good maintenance

T25
Sawing buyers' guide

Departments

7
Industry News

15
International Trade

28
Making Equipment Pay

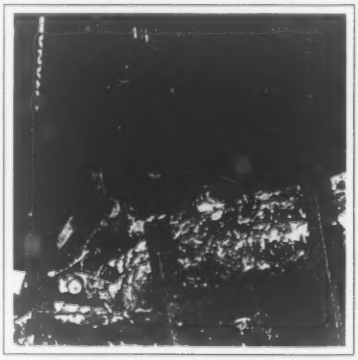
36
Regional News

38
Equipment

43
Books, Bulletins

44
Newsmakers

46
Meetings



Cover story, page 18

As the pressure on timber supply increases due to court injunctions and an endless array of lawsuits, industry needs to recognize the long-term threats of these actions

Timber supply woes worsen as suits lock up lands

By Michael D. Sullivan

Lewiston, Idaho

As this is being written, attorneys are marshalling their resources on both sides in the various court cases involving the northern spotted owl. The stakes are high. At risk is the foreclosure of nearly 2 billion bd ft of annual timber sales on federal lands in western Oregon and western Washington.

The impact of such an event on the region's federally dependent mills will, of course, be devastating. Tens of thousands of Northwest woodworkers could be forced into unemployment.

But there are broader implications of these actions for the wood industry at large.

Reduced supply, higher prices

One of the obvious results of reduced supply is higher prices. Since most national forest and other federal timber is sold at open public auction, just the threat of a shortage can send bid prices skyrocketing.

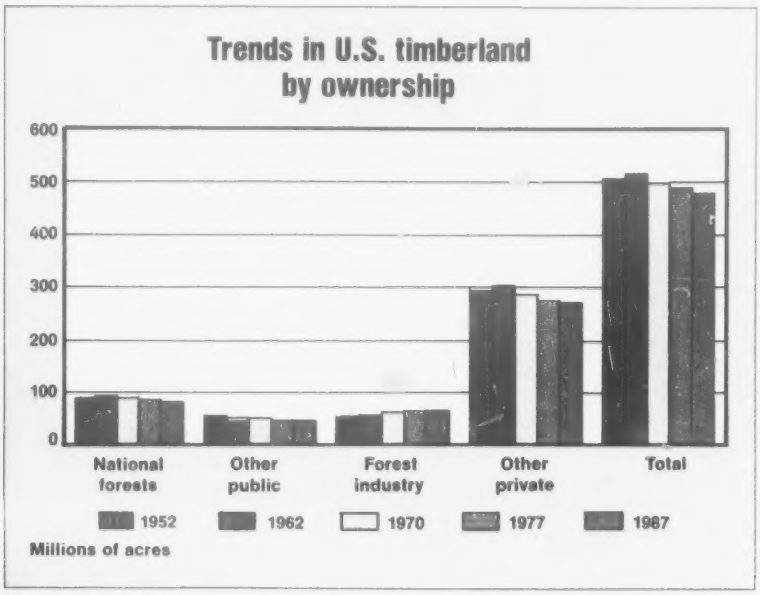
The threats are now real and the effects on bid prices are as predicted.

From the third quarter of 1987 to the third quarter of 1988, U.S. Forest Service stumpage prices increased from $130 per thousand bd ft to $160 per thousand.

The increases west of the Cascades have been even more dramatic in recent months, reflecting the increasing pressure on supply from court injunctions and the spotted owl suits.

Wholesalers and retailers haven't yet felt the sting of these shortages because inventories haven't yet been affected. Timber currently being harvested was purchased anywhere from a few months ago to a few years ago. The decline in harvest and the resulting impact on inventories won't be felt until the current shortages feed through the pipeline.

It is unfortunate, but too many elements of our industry fail to recognize a threat until it affects them directly. For the benefit of those who feel the current cries of "timber shortage" are just so much applesauce and wood demand will always be met, a bit of history might be appropriate.



Wood demand remains high

During the recession in the early 1980s, doomsayers arose with predictions that the housing recession was the harbinger of long-term trends which would permanently reduce wood demand. A few went so far as to predict that all of this would keep the nation's future annual wood consumption somewhere in the 35 billion bd ft range. Even the U.S. Forest Service, which had consistently projected a doubling of wood demand, backed off a bit in its 1984 Resource Planning Act Update.

Of course the reverse has occurred. Wood demand reached an all-time high of 50 billion bd ft in 1987, with 1988 and 1989 not far behind that record volume. Once again, the projections are for wood demand to nearly double in the next century.

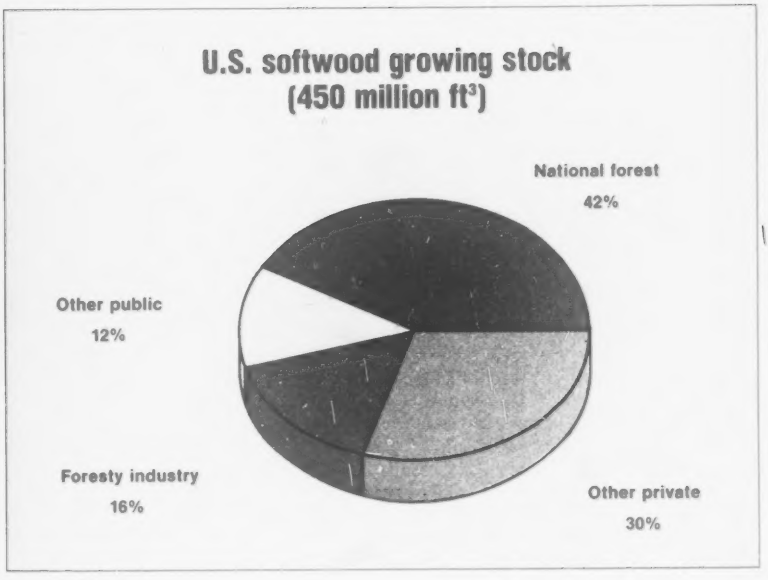
Wood continues to be a preferred construction material. Fortunately, it is found in abundance in the U.S., and this country has the knowledge not only to provide for its renewal but also to increase the level of production.

Instead of planning to increase domestic wood supplies, the U.S. continues to be a net importer of wood products. Still more amazing is the fact that the imports are coming from countries with neither the inventory nor the productive capacity of U.S. forests.

This raises several questions to which everyone involved in the wood business should be seeking answers. Where's the wood? Who owns it? If current domestic demand isn't being met, how will we meet increased future demands?

U.S., Canada, U.S.S.R.

A quick look at world softwood inventories shows that North America and the Soviet Union have the largest, with the U.S. and Canada clearly the leaders from the standpoint of produc-



tive capacity. And between those two countries, the U.S. is the standout both in terms of inventories and productive capacity. (Ironically, the major exporter of the wood to the U.S. is Canada. But both U.S. and Canadian researchers indicate that Canadian resource cannot keep up this pace indefinitely.)

The U.S. has an estimated softwood growing stock of about 450 million ft³. Some 42% is contained on the 85 million acres of forestland contained in the 190-million-acre national forest system under the jurisdiction of the U.S. Forest Service. Forest industry companies have about 16%, and smaller private ownerships contain 30%. Other federal agencies, states and municipalities control about 12%.

Western wood basket

About 300 million of the 450 million ft³ of softwood growing stock is found west of the 100th meridian. About 80% of that is on the national forests.

It's pretty clear that the nation's demands for softwood will not be achieved unless the national forests make a significant contribution. In the past decade, national forests have contributed somewhere between 10 and 12 billion bd ft annually. Contrary to some preservationist claims, the numbers haven't been rising. Moreover, the Forest Service is proposing a major reduction in the maximum allowable sale quantity from the national forests.

Still more reductions

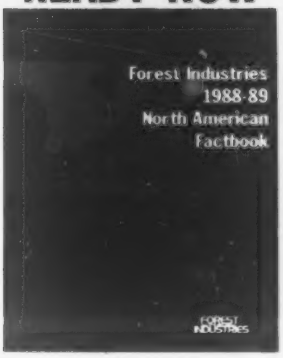
But the preservationist community isn't satisfied with the proposed reductions and continues to push to cut the national forest timber sales by about half — to six billion bd ft annually. They have even presented questionable "research," heavy to computer models based on erroneous assumptions, to show the reductions will have no impact on consumers.

Fortunately, they haven't been able yet — to sell these draconian measures to Congress or the Forest Service. But they continue to use a host of legal and administrative tactics to bring about the same result. If they are successful in reducing timber supplies from national forests, the results will be felt in all sectors of the industry.

Building some certainty into the supply equation from federal lands is critical to the industry's future. To do that, Congress must change the laws and policies which enable obstructionists to block federal agencies in their efforts to provide that certainty. ■

THE AUTHOR is communications manager, Northwest Region, Potlatch Corp., Lewiston, Idaho, and former vice president/communications of Northwest Forestry Assn., Portland, Ore. Sullivan notes that data in this article are from "An Analysis of the Timber Situation in the United States, 1989-2040," USDA Forest Service.

READY NOW



This all-new reference is the most complete product guide and industry factbook ever compiled about lumber and panel producers in the U.S. and Canada. It has been designed by the editors of *Forest Industries* to answer the most frequently asked questions about the industry.

Contents include: Production figures from 800 U.S. and Canadian lumber producers, including mill-by-mill breakdowns • Production data from North American panel producers • Detailed "where to buy" guide • Mergers/acquisitions • Import/export data • Information sources.

Order your 1988-89 edition now for free examination.

FOREST INDUSTRIES • Editorial Department • 500 Howard Street • San Francisco, CA 94105 • (415) 397-1881 • FAX: (415) 543-0256.

Please send me _____ copies of FOREST INDUSTRIES 1988-89 NORTH AMERICAN FACTBOOK at US$97 each. After 10 days if I am not fully satisfied with the book, I may return it for a full refund or cancellation of invoice. (CA, GA, IL, MA and NY residents, please add sales tax.)

☐ Payment enclosed ☐ Purchase order enclosed ☐ Send invoice

Publisher will pay postage and handling if payment enclosed; otherwise it will be added.

Signature: _____
(ALL orders must be signed to be valid.)

Name: _____

Title: _____

Company: _____

Address: _____
(give street address if you want delivery via U.P.S.)

City: _____ State/Province: _____

Postal Code _____ Country: _____

Telephone: ( ) _____

Fax: ( ) _____

FI 5/89

On Reader Service Card **Circle 222**

FOREST INDUSTRIES

Combining *The Timberman* and *The Lumberman*

PUBLISHING / SALES HEADQUARTERS

SAN FRANCISCO, CALIFORNIA 94105
500 Howard St., (415) 397-1881
Telex: 278273 Cable: Millfreepub
Leigh M. Freeman, Publishing Director
Leonard E. Haas, Group Publisher
Wini D. Ragus, Director of Circulation
Andrew A. Mickus, Director of Production
Gwen M. Kibbe, Ad Production Coordinator
Corinne Shulman, Project/Promotion Manager

REGIONAL SALES OFFICES

SAN FRANCISCO, CALIFORNIA 94105
500 Howard St.
(415) 397-1881
Telex: 278273 Fax: (415) 543-0256
William Little, Western Sales Manager
Jan Curcio, Assistant Regional Sales Manager
John Ferrari, Sales Assistant

CHICAGO, ILLINOIS 60601
35 E. Wacker Dr., (312) 372-6236
Bernice Bethel, Sales Assistant

MARIETTA, GEORGIA 30067
2000 Powers Ferry Center, Suite 450
(404) 952-1303 Fax: (404) 933-0666
Jay E. Schlosser, Southern Sales Manager
Mary Anne Thompson, Sales Assistant

LONDON, ENGLAND
Lansdowne Media Services Ltd.
Lansdowne House, 12 Church St.
Rickmansworth, Hertfordshire, UK WD3 1BS
Telephone: 0923-777711
Telex: 28764 LMS LTD G Fax: 0923-721103
David M. Lansdowne
Melissa Thomas, Sales Assistant

B-1180 BRUSSELS, BELGIUM
BWB Media Services
198 Avenue Winston Churchill, Boîte 4
Telephone: (02) 347-31-35
Telex: 63546 BWB B Fax: (02) 347-32-06
Brian W. Bussey
Wanda E. Schaar

D-4630 BOCHUM 6, FED. REP. GERMANY
Postfach 600 264
Telephone: 2327-88609 Telex: 820468 EDH
Fax: 2327-89257
Ernst Dieter Hartmann

TOKYO, JAPAN
Orient Echo Inc.
1101 Grand Maison Shimomiyabi-cho 8
Shinjuku-ku, Tokyo 162, Japan
Telephone/Fax: (03) 235-5961 Telex: J33376
Masahiko Yoshikawa

ADVERTISING: Complete offset negatives and inserts should be sent to FOREST INDUSTRIES, c/o American Press Div., Combined Communications Services Inc., 5601 Paris Rd., Columbia, Mo. 65202. Copy and art for publication-set ads, all insertion orders and special instructions should be sent to the publishing office: 500 Howard Street, San Francisco, Calif. 94105.

VBPA

©COPYRIGHT 1989 by Miller Freeman Publications Inc. All rights reserved. Contents may not be reproduced without permission. *Forest Industries, The Timberman, The Lumberman, National Timber Industry, Western Timber Industry* and *Industrial Wood Energy* are trademarks of Miller Freeman Publications Inc.

MILLER FREEMAN publications

Chairman of the Board: Clifford D. Jakes; President: Marshall W. Freeman; Vice Presidents: Charles C. Baake, Charles H. Benz, Leigh M. Freeman, Leonard E. Haas, Thomas L. Kemp, and Wini D. Ragus; Chief Financial Officer: Stephen A. Daniels; Treasurer: Miller Freeman III; Assistant Treasurer: Douglas M. Danny.

ADVERTISING INDEX

To obtain more information on advertised products in this issue, circle the corresponding number on the Reader Service Card facing page 35 in this issue.

	Page No.	Reader Service No.
Atlanta Engineering	47	
Bonney, Turner & Harris Inc.	47	
Buckman Laboratories Inc.	9,10	206,207
CAE Machinery Ltd.	W2	227
Caterpillar Inc.	13	209
Coe Manufacturing Co.	14	233-238
Coppa srl	40	220
Corley Manufacturing	6	216
Cornell Manufacturing Inc.	ES3	230
Deere & Co.	4-5,Cov4	204,202
Dryline Systems	45	225
Dubal, Beck, Harris & Associates	47	
Expo '89, Forest Products Machinery & Equipment Exposition	39	219
Feria Muestrario Internacional/Fimma '89	43	239
Forest Industries Bookshelf	16	211
Forest Industries 1988-89 North American Factbook	25	222
Forest Products Engineering	47	
Fuel Harvesters Equipment	ES4	232
Fulghum Industries Inc.	ES2	229
General Kinematics	30	217
Hallco Manufacturing Co. Inc.	44	224
Harris Group	47	
HCMA Consulting Group Inc.	47	
R.J. Hill Engineering	47	
International Conference on Scanning Technology	12	208
International Trade Consultants	47	
KH,A Engineering	47	
McDonough Manufacturing	IFC	200
Mid-South Engineering	47	
Mobil Oil Corp.	Cov3	201
Montgomery Industries International	38	223
Omark Industries (N.C. Division)	17	212
Parker Hannifin Corp.	1	205
Pease & Beadling Engineers	47	
Rexnord Inc., Mechanical Power Division	31	218
The Douglas Reiter Co.	47	
Sanders Co.	ES4	231
Search North America	47	
Secondary Wood Products Manufacturers Directory	42	215
Sick-Optik Elektronik Inc.	23	214
Simons-Eastern Consulting	47	
Spare Parts Manufacturers Inc.	22	213
Timbersof Systems Inc.	45	226
Webco Corp.	ES1	228
Western Roller Corp.	41	221

Technical Report: Sawing Technology

Ari Sawmill Equipment Ltd.	T19	110
Armstrong Manufacturing Co.	T2	101
Chaston Industrial Saw	T24	103
Deloro Stellite Inc.	T26	104
Ellison Co.	T28	106
Hannaco Knives and Saws	T29	108
International Sawing Technology Conference	T19	102
Pacific/Hoe Saw and Knife Co.	TIFC	100
B.H. Payne Co. Inc.	T28	107
Simonds Industries	T27	105
Schurman Machine	TOBC	109

The index on this page is provided as a service to readers. The publisher does not assume any liability for errors or omissions.